⑫ **EUROPEAN PATENT APPLICATION**

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㉟ Compositions for forming poly(oxazolidone/urethane) thermosets and products therefrom.

㉗ A process for the production of a thermoset composition
containing oxazolidone and urethane linkages characterised in
that it comprises reacting a polyisocyanate and a prepolymer
containing at least one terminal epoxy group and at least one
non-terminal, secondary hydroxy group is disclosed.
A thermoset composition characterised in that it com-
prises oxazolidone end urethane linkages in the recurring unit
which is substantially free of isocyanurate linkages, the said
oxazolidone linkages being present in the polymer backbone
and being separated from one another by ester linkages end
the said urethane linkages being present in side chains at-
tached to the polymer backbone is also disclosed.
The present invention offers advantages over the prior
art.

EP 0 077 175 A2

(54) **ROBUST LANGUAGE PROCESSOR AND METHOD**

ROBUSTER SPRACHPROZESSOR UND VERFAHREN

PROCESSEUR DE LANGAGE ROBUSTE ET PROCEDE ASSOCIE

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ACOUSTICS, SPEECH AND SIGNAL
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pages 2599 - 2601 'Determining the probability
of words in a string with a word-skipping model'
• PROCEEDINGS OF THE DARPA SPEECH AND
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method for understanding spontaneous speech
utterances' cited in the application
• SYSTEMS AND COMPUTERS IN JAPAN, vol.20,
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NATURAL LANGUAGE WORKSHOP, February
1992, US pages 305 - 310 STALLARD ET AL.
'Fragment processing in the DELPHI system'
cited in the application

# ROBUST LANGUAGE PROCESSOR AND METHOD

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| **Inventor:** | LINEBARGER MARCIA C (US); NORTON LEWIS M (US); DAHL DEBORAH A (US) | |
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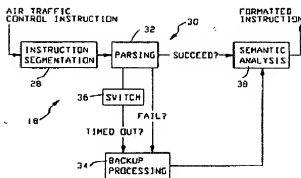WO9428541 (A3)
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Abstract of corresponding document: **WO9428541**

Apparatus and method are provided for segmenting (28), persing (30), interpreting and formatting (38) the content of instructions such as air traffic control instructions. Output from a speech recognizer (14, 22) is so processed to produce such instructions in a structured format such as for input to other software. There are two main components: an instruction segmenter (28) and a robust parser (18, 30). In the instruction segmenter (28), the recognized text produced by the speech recognizer (14, 22) is segmented into independent instructions and each instruction is processed. The instruction segmenter (28) receives a recognized air traffic control or other instruction, and segments it into individual commands. Utterances or other language are thereby broken up into their component instructions by detecting probable instruction boundaries. If normal processing fails, then robust backup processing (34) is invoked, as a fallback after a fixed time per word has elapsed or a processing failure has occurred. The robust parser (18, 30) allows the system (10, 20) to extract information from utterances that are not necessarily well formed or may have extraneous comments in them.

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(56) References cited:
• INTERNATIONAL CONFERENCE ON ACOUSTICS, SPEECH AND SIGNAL PROCESSING 92, vol.1, 23 March 1992, SAN FRANCISCO, CA, US pages 197 - 200 TSUBOI ET AL. 'A real-time task-oriented speech understanding system using keyword spotting'
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• PROCEEDINGS OF THE DARPA SPEECH AND NATURAL LANGUAGE WORKSHOP, February 1992, US pages 299 - 304 SENEFF 'A relaxation method for understanding spontaneous speech utterances' cited in the application
• SYSTEMS AND COMPUTERS IN JAPAN, vol.20, no.10, October 1989, NEW YORK, US pages 85 - 94 KOBAYASHI ET AL. 'Linguistic processing in an island-driven speech understanding system'
• PROCEEDINGS OF THE DARPA SPEECH AND NATURAL LANGUAGE WORKSHOP, February 1992, US pages 305 - 310 STALLARD ET AL. 'Fragment processing in the DELPHI system' cited in the application

(12) **EUROPEAN PATENT APPLICATION**

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(54) **Method and apparatus for recognizing speech using a knowledge base**

(57) An apparatus for recognizing sound information includes a sound recognition unit for recognizing sound information. A knowledge base stores knowledge concerning a type of data represented by the sound information. A prediction unit predicts the type of data represented by sound information to be subsequently recognized by checking the knowledge stored in the knowledge base. The sound recognition unit recognizes sound information to be subsequently recognized based on a prediction result obtained by the prediction unit. With this arrangement, the recognition accuracy is enhanced.
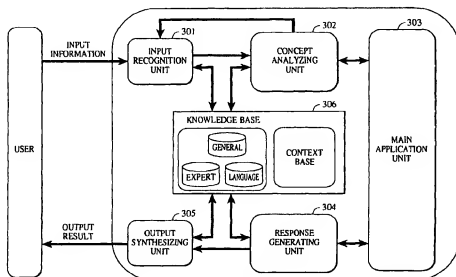
FIG. 3

(54) Presenting a script to be followed by a call center agent during a conversation with a customer

(57) A method and apparatus are provided for presenting script to be followed by a telemarketer during a threaded conversation with a customer. The method includes the steps of presenting a word content of a response of the customer to a first portion of the presented script and detecting key words and key words in context of the response. The method further includes the steps of evaluating the detected key words and key words in context to determine an information content, comparing the information content of the evaluated words with an information content of a plurality of expected customer responses and selecting the expected customer response with a closest relative match and following a script associated with the selected expected customer response of the customer as a second portion of the presented script.

FIG. I
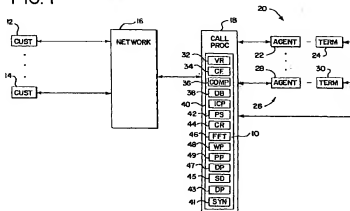
(12) **EUROPEAN PATENT APPLICATION**

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(54) **Expert system assisting agent and customer in determining an optimum network solution**

(57) An expert system adapted data network guidance engine. The invention allows an agent to interact with a customer and to provide selection and recommendation of data network products and/or services for the customer. The invention allows for the use of agents of varying skill levels, including relatively low skill level, without suffering deleterious performance. The data network guidance engine is operable to perform generation and selection of configurations that are generated using various heuristics. If desired, numerous iterations are performed within each of the heuristic operations. The data network guidance engine is operable to select recommended configurations from among a number of potential options. In addition, compatible configurations may also be identified. The data network guidance engine is one of the underlying engines within the expert system that allows the agent to provide real time interaction with a customer and to provide a real time recommended solution to that customer.
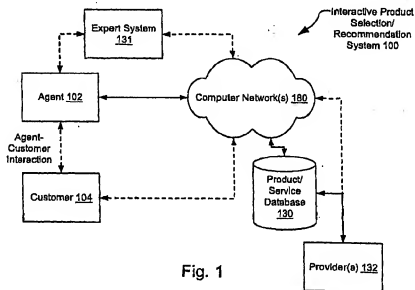
Fig. 1

(54) Human fallback method and system for interactive voice response systems

(57) Method for determining when a human operator should make an intrusion in an incoming communication between a caller (1) and an interactive voice response system (34). The decision to make an intrusion depends on a plurality of parameters, including the communication cost.

The speech recognition system uses a two-pass method; subsequently recognized speech elements are used for forcing the grammar used by the speech recognition module in a second pass.
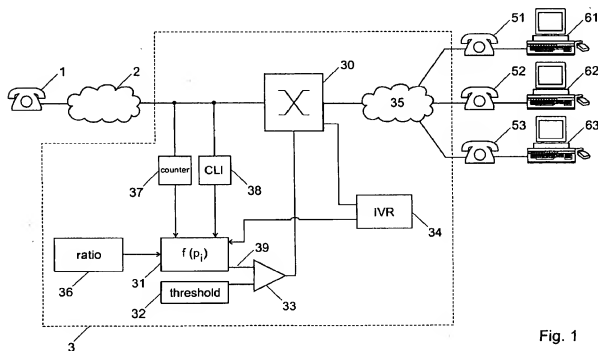
Advantage: does not disadvantage remote users.

Fig. 1

EP 1 424 844 A1

(54)     **Ideal transfer of call handling from automated systems to human operators**

(57)     The present invention relates to dynamic poli-
cies for transferring people from an automated or user-
directed call handling system to a human operator, de-
pending on considerations of the likelihood of the failure
of the interaction with the call-handling system, predic-
tions about the expected time or frustration associated
with using the system, and the current load on human
operators. Systems and methods leverage probabilistic
models of system and user behaviors built from logged
data. A decision-theoretic analysis and corresponding
models of ideal decisions about the transfer of calls from
an automated system to a human operator are provided.
The methods have application to a spectrum of call-han-
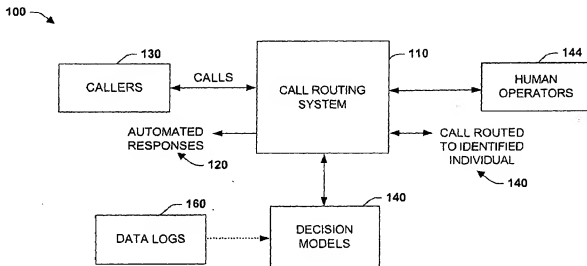dling systems including touch-tone and speech-recog-
nition-based systems.

100 ⟶



FIG. 1